

fuel injectors located adjacent to separate engine cylinders, a cold start fuel injector and heater, having a plurality of separately controlled independent heating element sections, fluidly coupled to the engine cylinders, and an air passageway having a pivotally secured throttle valve disposed therein, said method comprising the steps of:

initiating power to the heater for a period of time before the engine is started;

supplying fuel to the engine cylinders through the cold start injector;

mixing the fuel from the cold start injector with air to produce an air-fuel mixture;

passing said air-fuel mixture over said heater elements to cause the fuel to be vaporized;

supplying the vaporized air-fuel mixture to the engine cylinders when the engine is started; and

switching from fuel supplied by the cold start injector to fuel supplied by the plurality of fuel injectors after the engine reaches a pre-established threshold measured by temperature or time.

39. (New) A method for reducing automobile exhaust emissions according to claim 38 further comprising the step of suspending power to the heater while the engine is being cranked during engine start up.

40. (New) A method for reducing automobile exhaust emissions according to claim 38 further comprising the step of retarding the engine's spark until the engine temperature reaches about 60°C.

41. (New) A method for reducing automobile exhaust emissions according to claim 38 further comprising the step of discontinuing power to the heater after switching from said cold start fuel injector to said plurality of fuel injectors.

42. (New) A method for reducing automobile exhaust emissions according to claim 41, further comprising the step of cleaning deposits off the heater by momentarily spraying fuel on the heater from the cold start fuel injector.

43. (New) A method for reducing automobile exhaust emissions according to claim 42 further comprising the step of simultaneously suspending the fuel supplied from the port fuel injectors by an amount substantially equal to the fuel supplied by the cold start fuel injector.

44. (New) A method for reducing automobile exhaust emissions according to claim 38 wherein said step of switching from fuel supplied by the cold start injector to fuel

supplied by each of the port injectors after the engine reaches a temperature of about 60°C.

45. (New) A method for reducing automobile exhaust emissions according to claim 38 further comprising the steps of:

measuring the maximum amount of current used to initially power the heater;

comparing the measured maximum current to a preset threshold current level; and

triggering a malfunction indicator if the measured maximum current is different from the threshold current level.

46. (New) A method for reducing automobile exhaust emissions according to claim 38 further comprising the steps of:

measuring the amount of current used by the heater after the heater has reached a steady state temperature;

comparing the measured steady state current level to a preset threshold current level; and

triggering a malfunction indicator if the measured steady state current level is different from the threshold current level.

47. (New) A method for reducing automobile exhaust emissions according to claim 38 further comprising the step of limiting the amount of air to be mixed with the fuel by controlling the rotational position of the throttle.

48. (New) A method for reducing automobile exhaust emissions according to claim 38 wherein the heater contains a plurality of separate heater elements, said method further comprising the step of varying the power to the separate heater elements to effect different temperatures in the different heater elements.

49. (New) A method for reducing automobile exhaust emissions according to claim 38 wherein the air-fuel mixture is passed over the heater in a circuitously swirling fashion with respect thereto.

50. (New) A method for reducing automobile exhaust emissions during the cold start of a multi-cylinder internal combustion engine having a fuel supply, a plurality of fuel injectors located adjacent to separate engine cylinders, a cold start fuel injector and heater fluidly coupled to the engine cylinders, and an air passageway having a pivotally secured throttle valve disposed therein, said method comprising the steps of:

initiating power to the heater for a period of time before the engine is started;

supplying fuel through the cold start injector;

mixing the fuel from the cold start injector with air to produce an air-fuel mixture;

passing said air-fuel mixture over the heater to cause the fuel to be vaporized;

supplying the vaporized air-fuel mixture to the engine cylinders when the engine is started;

switching from fuel supplied by the cold start injector to fuel supplied by the plurality of fuel injectors after the engine reaches a pre-established threshold measured by temperature or time;

discontinuing power to the heater; and

cleaning deposits off the heater by momentarily spraying fuel on the heater from the cold start fuel injector.

51. (New) A method for reducing automobile exhaust emissions according to claim 50 further comprising the step of simultaneously suspending the fuel supplied from the port fuel injectors by an amount substantially equal to the fuel supplied by the cold start fuel injector during the step of cleaning deposits off the heater.

52. (New) A method for reducing automobile exhaust emissions according to claim 50 further comprising the step of retarding the engine's spark until the engine temperature reaches about 60°C.

53. (New) A method for reducing automobile exhaust emissions according to claim 50 further comprising the step of suspending power to the heater while the engine is being cranked during engine start up.

54. (New) A method for reducing automobile exhaust emissions according to claim 50 wherein said step of switching from fuel supplied by the cold start injector to fuel supplied by each of the port injectors after the engine reaches a temperature of about 60°C.

55. (New) A method for reducing automobile exhaust emissions according to claim 50 further comprising the step of limiting the amount of air to be mixed with the fuel by controlling the rotational position of the throttle.

56. (New) A method for reducing automobile exhaust emissions during the cold start of a multi-cylinder internal combustion engine having a fuel supply, a plurality of fuel injectors located adjacent to separate engine cylinders, a cold start fuel injector and heater fluidly coupled to the engine cylinders, and an air passageway having a

pivottally secured throttle valve disposed therein, said method comprising the steps of:

initiating power to the heater for a period of time before the engine is started;

supplying fuel through the cold start injector;

mixing the fuel from the cold start injector with air to produce an air-fuel mixture;

passing said air-fuel mixture over the heater to cause the fuel to be vaporized;

supplying the vaporized air-fuel mixture to the engine cylinders when the engine is started;

switching from fuel supplied by the cold start injector to fuel supplied by the plurality of fuel injectors after the engine reaches a pre-established threshold measured by temperature or time;

measuring the maximum amount of current used to initially power the heater;

comparing the measured maximum current to a preset threshold current level; and

triggering a malfunction indicator if the measured maximum current is different from the threshold current level.

57. (New) A method for reducing automobile exhaust emissions according to claim 56 further comprising the steps of:

measuring the amount of current used by the heater after the heater has reached a steady state temperature;

comparing the measured steady state current level to a preset threshold current level; and

triggering a malfunction indicator if the measured steady state current level is different from the threshold current level.

58. (New) A method for reducing automobile exhaust emissions according to claim 56 further comprising the step of suspending power to the heater while the engine is being cranked during engine start up.

59. (New) A method for reducing automobile exhaust emissions according to claim 56 wherein said step of switching from fuel supplied by the cold start injector to fuel supplied by each of the port injectors after the engine reaches a temperature of about 60°C.